CECOM DIRECTORATE FOR SAFETY
RADIATION SAFETY PROGRAM (RSP) EVALUATION CHECKLIST
Revision 6, 03 March 2005

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 LOCATION:_____

I. RADIATION SAFETY PROGRAM (RSP).

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

OHM: _____

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SRSO: _____

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ARSO: _____

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OTHERS: _____

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Y N NA 1. Has the Commander/AG adopted a formal RSP regulation? (AR 11-9, 1-4k (2)(a)) (10 CFR 20.1101(a)) Regulation #_____

Y N NA 2. Has the Commander/AG provided and maintained adequate resources for the RSP to ensure safety of personnel, property, and the environment? (NGR 385-11, 1-6d(1))

Y N NA 3. Is a State Radiation Safety Officer (SRSO) designated in writing by the Commander/AG? (AR 11-9, 1-4j(1)) (NGR 385-11, 1-6d(2))

Y N NA 4. Is an Alternate SRSO designated? (NGR 385-11, 1-6d(2))

Y N NA 5. Is the SRSO the Occupational Health Specialist/Nurse/Manager or a full-time technician? (NGR 385-11, 1-6d(2))

Y N NA 6. Do the SRSO and ASRSO have sufficient education or training as required for the position? (NGR 385-11, 1-6e(11))

Y N NA 7. Has the SRSO attended 8 hours RSP training within the past 2 years? (NGR 385-11, 1-6e(12))

Y N NA 8. Are Individually Controlled Radioactive Item (ICRI) movements coordinated with the license manager, NGB RSSO and SRSO. (NGR 385-11, 4-2b)

Y N NA 9. Is an annual physical inventory of radioactive materials (to include ICRI) maintained and kept for 3 years? (AR 11-9, 1-4k(4) (NGR 385-11, 2-4) (10 CFR 20.2102)

Y N NA 10. Is an inventory of ionizing radiation producing devices maintained? AR 11-9, 1-4k(4)) (NGR 385-11, 2-4c) (AR 40-5, 9-9a(2))

Y N NA 11. Is an inventory of generally licensed devices maintained (APD-2000, Ion Scan, Vapor Tracer, etc.)? AR 11-9, 1-4k(4)) (NGR 385-11, 2-4c) (AR 40-5, 9-9a(2))

Y N NA 12. Has the local medical authority addressed the frequency of medical examinations for radiation workers under the health hazard surveillance program? (AR 40-5, 5-9)

Dosimetry programs are implemented at the following locations:

II. DISPOSAL.

Y N NA 1. Are ARNG requests for disposal of radioactive items routed through the SRSO to the Radiation Safety Staff Officer (RSSO)? (NGR 385-11, 6-7a)

Y N NA 2. Are records maintained for disposal of radioactive materials? (NGR 385-11, 6-7c)

III. IONIZING RADIATION DEVICES INVENTORY: List ICRI, Generally Licensed Items, and X-ray producing equipment.

NOMENCLATURE	MODEL NUMBER	LOCATION

IV. COMBINED SUPPORT MAINTENANCE SHOP (CSMS)/CALIBRATION AND MAINTENANCE OPERATIONS.
(AN/UDM-2, AN/UDM-6, M43A1 Chemical Agent Detector (CAD), and Chemical Agent Monitor (CAM) commodity RSP are usually collocated at the CSMS. The RSP review for these items is addressed in separate sections.)

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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Y N NA 1. Does the CSMS have a published SOP for handling radioactive commodities? _____ (AR 40-5, 9-9a(2a)) (TB 385-4, 5-6)

Y N NA 2. Is the SOP approved by the SRSO? (RSSO Recommendation)

Y N NA 3. Is the LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 4. Is an alternate LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 5. Do the LRSOs have the education and training required for work with the radioactive materials? (NGR 385-11, 1-6g(1))

Y N NA 6. Does the CSMS utilize/maintain any of the following commodities? If so, complete the appropriate checklist section:

Y N NA a. AN/UDM-2 (Section VII)
Y N NA b. AN/UDM-6 (Section VIII)
Y N NA c. H-3 Maintenance/Storage Areas (Section VI)
Y N NA d. M43A1s/CAMs (Section IX)

Complete Storage Checklist, Section XV

 LOCATION:_____

V. U.S. PROPERTY AND FISCAL OFFICE (USP&FO) WAREHOUSE OPERATIONS - SHIPPING, RECEIVING, STORAGE.

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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Y N NA 1. Is there an M8A1 & CAM serialization officer assigned? (AR 710-3)

Y N NA 2. Are M8A1 & CAM Serialization records maintained IAW AR 710-3? (AR 710-3)

Y N NA 3. Does the USPFO have a published SOP for radioactive commodities? SOP No._____ (AR 40-5, 9-9a(2a))

Y N NA 4. Does the LRSO maintain a copy of the SOP? (AR 40-5 9-9a(2a))

Y N NA 5. Is the SOP approved by the SRSO? (RSSO Recommendation)

Y N NA 6. Is the LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 7. Is the Alternate LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 8. Do the LRSOs have the education and training required for work with the radioactive materials? (NGR 385-11, 1-6g(1))

Y N NA 9. Are personnel aware of the requirement to prohibit radioactive materials from the Defense Reutilization and Marketing Office (DRMO)? (NGR 385-11, 6-5)

Y N NA 10. Do turn-in documents indicate that radioactive items are free of radioactive material/contamination prior to turn-in at the DRMO?

Y N NA 11. Are surveys of outgoing and incoming shipment packages performed and results documented and maintained on file for 5 years? (NGB 385-11, 5-3d) (Incoming surveys not required IAW 10 CFR 20.1906 if less than Type A quantities, special form or gas.)

Y N NA 12. Are copies of the Radioactive Material Movement Form (RMMF) given to the local Transportation Officer and a copy included with the shipping records. (RSSO Recommendation)

Y N NA 13. Are contamination surveys of work surfaces, post DMIL, performed? (10 CFR 20.1301)

Y N NA 14. Are radiation and removable contamination surveys performed **quarterly** of the radioactive material storage areas? (10 CFR 20.1301)

Complete Storage Checklist, Section XV

VI. H-3 MAINTENANCE/STORAGE AREAS (CSMS ARMAMENT SHOP; MANEUVER AREA TRAINING EQUIPMENT SITE (MATES); UNIT TRAINING EQUIPMENT SITE (UTES)).

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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Y N NA 1. Does the activity have a published SOP for receipt, maintenance and storage of H-3 fire control devices containing radioactive material? _____ (AR 40-5, 9-9a(2a))

Y N NA 2. Is the SOP approved by the SRSO? (RSSO Recommendation)

Y N NA 3. Is the LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 4. Is an alternate LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 5. Do the LRSOs have the education and training required for work with the radioactive materials? (NGR 385-11, 1-6g(1))

Y N NA 6. Are tritium devices examined/inspected in an adequately ventilated area prior to being placed in the storage area/brought into the shop? (NRC License 12-00722-06)

Y N NA 7. Are source illumination checks performed prior to and following maintenance of fire control devices? (NRC License 12-00722-06)

Y N NA 8. Is maintenance limited to replacement of modular components that contain H-3 and purging of H-3 cells using properly rated equipment? (NRC License 12-00722-06)

Y N NA 9. Are work surfaces covered with kraft while performing maintenance functions? (NRC License 12-00722-06)

Y N NA 10. Are contamination surveys of work surfaces and storage areas performed **quarterly**? (NRC License 12-00722-06) (10 CFR 20.1301)

Y N NA 11. Do maintainers have the education and training required for work with the radioactive materials? (NRC License 12-00722-06)

Complete Storage Checklist, Section XV

 LOCATION:_____

VII. AN/UDM-2, RADIAC CALIBRATOR SET (LIN: C75606, NSN: 6665-00-179-9037, TM 11-6665-227-12).

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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Y N NA 1. Does the calibrator(s) location have a published SOP? AR 40-5, 9-9a(2a))
SOP:_____ SN:_____

Y N NA 2. Does the Local RSO maintain a copy of the SOP? (AR 40-5 9-9a(2a))

Y N NA 3. Is the SOP approved by the SRSO? (RSSO Recommendation)

Y N NA 4. Is the LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 5. Is an alternate LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 6. Do the LRSOs have the education and training (e.g. CECOM 40 Hour RSO Course) required to work with the radioactive materials? (NGR 385-11, 1-6g(1))

Y N NA 7. Are source leak tests performed every **6 months** as required and results maintained on file for 3 years after the record is made? (NRC License 29-01022-14)(10 CFR 20.2102(b))

Y N NA 8. Are radiation surveys of the storage areas performed **monthly**? (NRC License 29-01022-14) (10 CFR 20.1301)

Y N NA 9. Is an AN/PDR-77 or equivalent used at all times to monitor the UDM-2 calibration area during use? (TB 11-6665-227-12)

Y N NA 10. Is the calibration area physically secured during the use of the UDM-2? (TB 11-6665-227-12)

Y N NA 11. Have operators received the required 8 hours of training and is the training documented? (NRC License 29-01022-14)

Y N NA 12. Is a copy of the Special Form and Type A Package certification documentation maintained on file at each location that is required to ship the AN/UDM-2? (49 CFR 173.415) (49 CFR 173.476)

Y N NA 13. Does the person shipping the UDM-2 have the education and training (e.g. CECOM 24 Hour RCIT Course or 80 Hour DoD Course) required to certify the shipmemt? (DoD 4500.9-R, 204.D)

Complete Storage Checklist, Section XV

 LOCATION:_____

VIII. AN/UDM-6 RADIAC CALIBRATOR SET (LIN: C74507, NSN: 6665-00-767-7497, TM 11-6665-248-10).

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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Y N NA 1. Does the calibrator location have a published SOP? (AR 40-5, 9-9a(2a))
SOP:_____ SN:_____

Y N NA 2. Does the Local RSO maintain a copy of the SOP? (AR 40-5, 9-9a(2a))

Y N NA 3. Is the SOP approved by the SRSO? (RSSO Recommendation)

Y N NA 4. Is the LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 5. Is an Alternate LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 6. Do the LRSOs have the education and training required to work with the radioactive materials? (NGR 385-11, 1-6g(1))

Y N NA 7. Are source leak tests performed every **3 months** as required and results maintained on file for 3 years after the record is made? (NRC License 29-01022-14)(10 CFR 20.2102(b))

Y N NA 8. Is the instrumentation adequate to properly perform a contamination survey (screening) of the leak test? (NGR 385-11, 1-6d(1)(b))

Y N NA 9. Are operators properly trained and is the training documented? (NRC License 29-01022-14)

Complete Storage Checklist, Section XV

IX. M43A1 CHEMICAL AGENT DETECTOR (CAD) M8A1 LIN: A32355, NSN: 6665-01-105-5623. The M43A1 is a component part of the M8A1 Automatic Chemical Agent Alarm.
CHEMICAL AGENT MONITOR (CAM) CAM LIN: C05701, NSN: 6665-01-199-4153.
IMPROVED CHEMICAL AGENT MONITOR (ICAM) ICAM LIN: C05701, NSN: 6665-01-357-8502.
The responsibility for the requirements listed below are as follows: (U) USP&FO, (C) CSMS, (S) SRSO, and (LC) Local Commander.

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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Y N NA 1. (S) (LC) Does the CAD/CAM have a published SOP?
Title:_____
(AR 40-5, 9-9a(2a))

Y N NA 2. (S) Is a copy of the SOP maintained locally?
(AR 40-5, 9-9a(2a))

Y N NA 3. (S) Is the SOP approved by the SRSO?
(RSSO Recommendation)

Y N NA 4. (S) (LC) Did CAD/CAM users receive initial radiation safety training?
(TACOM-RI NRC License Number 12-00722-16)

Y N NA 5. (S) (LC) Is user refresher training conducted and documented annually?
(TACOM-RI NRC License Number 12-00722-16)

Y N NA 6. (C) Are maintenance personnel properly trained?
(TACOM-RI NRC License Number 12-00722-16)

Y N NA 7. (U)(C) Is an annual physical inventory of CADs/CAMs performed and results maintained on file?
(NGR 385-11, 2-4a) (10 CFR 20.2102)

8. (U)(C) Does the CAM/CAM Inventory records include:

Y N NA a. Serial Number of CAD/CAM Cell Module
(AR 710-3, 4-51a)

Y N NA b. Serial Number of CAD/CAM Detector (AR 710-3, 4-51a)

Y N NA c. Field Unit's Address (UIC) (NGR 385-11, 2-4a)

Y N NA 9. (U) Are procedures in place to notify the TACOM-RI RSO when discrepancies are discovered in the physical inventory? (TACOM-RI NRC License Number 12-00722-16)

Y N NA 10. (U) Are procedures in place to notify the Property Book Officer/Serialization Officer/USP&FO concerning the receipt/transfer/disposal/deployment of a CAD/CAM? (TACOM-RI NRC License Number 12-00722-16, AR 710-3, Chapter 4)

Y N NA 11. (C) Are CAD annual source leak tests performed and results maintained on file 3 years after the record is made? (TACOM-RI NRC License Number 12-00722-16) (10 CFR 20.2102(b))

Y N NA 12. (C) Are leak tests performed prior to any maintenance (other than leak test) on the CAD/CAM? Safety of Use Message (SOUM) SBCCOM 01-16 (dated Sep 01)

Y N NA 13. (C) Are CAD/CAM source leak test samples forwarded to CECOM for analysis? (NGR 385-11, 1-6c(8))

Y N NA 14. (C) Are work surfaces monitored (and the results documented) each day following maintenance/leak test actions? (RSSO Recommendation)

Y N NA 15. (C) Are work surfaces surveyed with appropriate RADIAC meters and wipe tested at least **monthly**?
(TACOM-RI NRC License Number 12-00722-16)

Y N NA 16. (C) Maintenance operations do not include or involve any repair or contact with the Am-241 plated source or the Ni-63 source?
(TACOM-RI NRC License Number 12-00722-16)

Complete Storage Checklist (Section XVI) if site visit to a unit is made.

 LOCATION:_____

X. MC-1 MOISTURE/DENSITY GAUGE (LIN: W02673, NSN: 6635-01-030-6896, TM 5-6635-386-12&P).

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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Y N NA 1. Does the MC-1 have a published SOP? (AR 40-5, 9-9a(2a)) (TM 5-6635-386-12&P, 4-10c)
SOP:_____SN: _____

Y N NA 2. Does the Local RSO maintain a copy of the SOP? TM 5-6635-386-12&P, 4-10c)

Y N NA 3. Is the SOP approved by the SRSO? (TM 5-6635-386-12&P, 4-10c)

Y N NA 4. Is the LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g), (TM 5-6635-386-12&P, 4-9c))

Y N NA 5. Is an Alternate LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g) (TM 5-6635-386-12&P, 4-9c)

Y N NA 6. Do the LRSOs have the education and training required to work with the radioactive materials? (NGR 385-11, 1-6g(1)) (TM 5-6635-386-12&P, 4-9c)

Y N NA 7. Are source leak tests performed at intervals not to exceed 1 year as required and results maintained on file for 3 years after the record is made? (NRC License 12-01222-05, para 12A(1)) (TM 5-6635-386-12&P, 4-25)

Y N NA 8. Does source leak test report include the S/N, RSO and Telephone Number for the Tester? (TM 5-6635-386-12&P, 4-10e)

Y N NA 9. Have unit personnel been instructed by the RSO in safe work practices, emergency procedures, and harmful effects of radiation exposure? (TM 5-6635-386-12&P, 4-10b)

Y N NA 10. Are operators trained in the care, maintenance, and operation of the tester? (TM 5-6635-386-12&P, 4-12a)

Y N NA 11. Are radiation surveys of the storage areas performed **semi-annually**? (NRC License 12-00722-06) (10 CFR 20.1301)

Y N NA 12. Is a tester users log maintained? (TM 5-6635-386-12&P, 4-12b)

Y N NA 13. Is an AN/PDR-77 or equivalent on hand for operators? (TM 5-6635-386-12&P, 4-17c)

Y N NA 14. Are testers stored in locked, unoccupied and isolated areas? (NRC License 12-01222-05) (TM 5-6635-386-12&P, 4-12c)

Y N NA 15. Are the RSO and authorized operators the only personnel with access to the tester/case when in storage? (NRC License 12-01222-05) (TM 5-6635-386-12&P, 4-12d)

Y N NA 16. Does the person shipping the MC-1 have the education and training (e.g. CECOM 24 Hour RCIT Course or 80 Hour DoD Course) required to certify the shipmemt? (DoD 4500.9-R, 204.D)

Complete Storage Checklist, Section XV

Complete Personnel Dosimetry Program Checklist, Section XVI

LOCATION:_____

XI. LORAD LPX-160 X-RAY UNIT. Nondestructive test equipment (i.e., the Lorad Model LPX-160A, is an air or water cooled x-ray unit with an operating potential of up to 160 kV and a tube current of up to 5 mA).

PERSONNEL INTERVIEWED/CURRENT ADDRESS:_____

Y N NA 1. Has the organization/installation Commander established, in writing, a formal radiation safety program consistent with Federal and Army regulations? (AR 11-9, 1-4k(2)) (TM 1-1500-335-23, Section IX, para 6.9.2.1a)

Y N NA 2. Does the owning organization retain a copy of the Department of the Army Radiation Authorization (ARA) number A45-0129-NGB and amendments? (AR 11-9, 2-3a)

Y N NA 3. Is a qualified RSO designated in writing by the local Commander? (AR 11-9, 1-4k(1)) (AR 40-5, 9-4b) (TM 1-1500-335-23, Section IX, para 6.9.2.1c)

Y N NA 4. Is a qualified Alternate RSO designated in writing by the local Commander? (AR 40-5, 9-4b) (TM 1-1500-335-23, Section IX, para 6.9.2.1c)

Y N NA 5. Do the RSOs have the education and training required to work with the radiation hazards involved? (TM 1-1500-335-23, Section IX, para 6.9.2.1c)

Y N NA 6. Have all personnel performing radiography been school-trained and certified for Additional Skill Identifier "N2" or equivalent? (TM 1-1500-335-23, Section IX, para 6.9.2.1h)

Y N NA 7. Has the Commander appointed in writing a qualified radiographer to serve as "Radiography Supervisior" and supervise overall operations and ensure compliance with all aspects of the RSP? (TM 1-1500-335-23, Section IX, para 6.9.2.1k)

Y N NA 8. Implement dosimetry provisions of AR 11-9 and DA PAM 40-18? (TM 1-1500-335-23, Section IX, para 6.9.2.1d)

Y N NA 9. Has the RSO or his designated alternate conducted and documented initial training and periodic retraining of all personnel (including support personnel such as radiation monitors) which is consistent with 10 CFR 19 and their assigned duties? (TM 1-1500-335-23, Section IX, para 6.9.5.1)

Y N NA 10. Does the training program mandate and document annual retraining of at least eight hours duration for radiographer(s)? (TM 1-1500-335-23, section IX, para 6.9.3.1.2)

Y N NA 11. Is an internal training inspection program established and training evaluation documented within the unit to demonstrate that performance of each radiographer and each radiographer's assistant is routinely observed? (TM 1-1500-335-23, Section IX, para 6.9.3.2.4)

Y N NA 12. Has the Commander appointed a Radiation Safety Committee? (TM 1-1500-335-23, Section IX, para 6.9.2.1e)

Y N NA 13. Does the RSC meet at least once in each six month period? (AR 11-9, 1-7a)

Y N NA 14. Does the RSO provide a copy of the RSC minutes to the installation RSO? (AR 11-9, 1-7c)

Y N NA 15. Were plans and specifications for construction of new facilities or modifications of other facilities reviewed by a qualified expert? (TM 1-1500-335-23, Section IX, para 6.9.2.1f)

Y N NA 16. Assure that procedures to be followed when an accident or incident occurs are defined, that individuals are designated (in writing) to receive notice in the event of emergencies and that radiation accidents and incidents are reported as specified by AR 385-40 and 10 CFR. (TM 1-1500-335-23, Section IX, para 6.9.2.1g)

Y N NA 17. Are only qualified operators allowed to operate radiography equipment? (TM 1-1500-335-23, Section IX, para 6.9.2.1h)

Y N NA 18. Do operators perform "daily pre-operational/operational/post-operational" checks on the equipment and surveys to ensure radiation safety? (TM 1-1500-335-23, Section IX, para 6.9.2.1h)

Y N NA 19. Is the RADIAC instrumentation adequate to properly perform routine radiation surveys? (TM 1-1500-335-23, Section IX, para 6.9.2.1i)

Y N NA 20. Is the RADIAC instrumentation properly calibrated for ACTIVE use? (TB 43-180) (TM 1-1500-335-23, Section IX, para 6.9.11.1b)

Y N NA 21. Is a DA Label 80 with a current calibration date placed in a conspicuous location on the instrument? (AR 40-5, 9-8a(3))

Y N NA 22. Are adequate quantities of X-ray survey instruments on hand and available for use? (TM 1-1500-335-23, Section IX, para 6.9.11.2)

Y N NA 23. Are appropriate radiation check sources available to verify proper operation of survey instruments prior to their use? (TM 1-1500-335-23, Section IX, para 6.9.11.1.1)

Y N NA 24. Are adequate quantities and types of TLDs on hand and available for use (to include dosimetry for supporting personnel and visitors if applicable)? (TM 1-1500-335-23, Section IX, para 6.9.12.1)

Y N NA 25. Does the Radiography Supervisor have and properly maintain a daily utilization log for recording dosimeter results? Do provisions exist for maintenance of dosimetry data during periods of absence of the Radiographer Supervisor? (NOTE: This log is the only source of radiation exposure information until TLDs are processed) (TM 1-1500-335-23, Section IX, para 6.9.14.2)

Y N NA 26. Does the dosimetry program incorporate special provisions to assure compliance with requirements (e.g., statements of pregnancy and frequency of TLD change) applicable to pregnant females and minors? (TM 1-1500-335-23, Section IX, para 6.9.13.1)

Y N NA 27. Instruct the RSO to report quarterly the collective exposure, the highest exposure and the average exposure to the RSC. (AR 40-5, 9-6a(5)) (TM 1-1500-335-23, Section IX, para 6.9.2.3d)

Y N NA 28. Does the Commander perform, or cause to be performed, an annual quality assurance audit/self-assessment of the Radiation Safety Program? (TM 1-1500-335-23, Section IX, para 6.9.2.1j)

Y N NA 29. Does the RSP assure that radiography operations are not conducted on non-Army property without verification that such operation is properly licensed by and in full compliance with applicable state and local regulations and laws? (TM 1-1500-335-23, Section IX, para 6.9.2.1l)

30. Access to all high radiation areas generated by radiographic operations shall be controlled by: (TM 1-1500-335-23, Section IX, para 6.9.17.2)

Y N NA a. Control devices that, upon entry into the area, causes the level of radiation to be reduced (below that level at which an individual might receive a deep dose equivalent of 100 rem (1 mSv) in 1 hour at 30 centimeters from the source (or the surface the radiation penetrates).

Y N NA b. Control devices that energizes a conspicuous visible or audible alarm so that the individual entering the area and the supervisor of the activity are made aware of the entry.

Y N NA c. Entryways that are locked, except during periods when access to the area is required, with positive control over each individual entry.

Y N NA d. Continuous direct or electronic surveillance that is capable of preventing unauthorized entry.

31. Implement the minimum mandatory requirements when performing radiographic inspection operations in unshielded areas, such as: (TM 1-1500-335-23, Section IX, para 6.9.18.3.3.2)

Y N NA a. Assure that at least two serviceable, properly calibrated radiation survey meters are in use during all unshielded radiography operations?

Y N NA b. A minimum of one pocket dosimeter and/or one personal alarming dosimeter, and one TLD badge for each radiographer involved in the radiography operations.

Y N NA c. An interlock assembly designed to prevent irradiation unless a properly functioning warning light is connected in the circuit.

Y N NA d. At least two 250-foot coils of rope with sufficient support stands.

Y N NA e. Radiation warning signs, 20 each, as applicable.

Y N NA f. At least 75 feet of power cable and coolant hose; or as recommended by the manufacturer.

Y N NA g. A radiation warning sign with a rotating/flashing strobe type light properly emplaced and operational prior to X-ray production?

Y N NA h. A "X-RAY ON" label affixed to the warning beacon?

Y N NA i. For night radiographic operations, sufficient lighting equipment to illuminate the area.

Y N NA 32. Mandate recording of records of radiation surveys to document that radiation safety surveys are actually being performed prior to each radiography operation? (TM 1-1500-335-23, Section IX, para 6.9.7)

Y N NA 33. Assure that x-ray equipment is adequately secured when not in use to preclude unauthorized use? (TM 1-1500-335-23, Section IX, para 6.9.18.3.2h)

Complete Personnel Dosimetry Program Checklist, Section XVI

 LOCATION:_____

XII. Maintenance of Magnesium-Thorium Alloy Aircraft Engine Parts.

PERSONNEL INTERVIEWED/MET:

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Y N NA 1. Is licensed maintenance limited to those Aviation Maintenance Activities (AVCRADs, AVIMs, AASFs) that have a mission requirement to perform this maintenance? (NRC License STB-1579)

Y N NA 2. Is maintenance limited to those procedures specifically called out in the license? (Authorized maintenance includes hand filing, hand sanding, hand retapping of threads, chemical removal of and treatment of corrosion, reapplication of protective coatings, and drilling. Prohibited procedures include all operations involving machine tools except drilling.) (NRC License STB-1579)

Y N NA 3. Is instruction provided to aviation maintenance personnel prior to their authorization to perform licensed maintenance? (NRC License STB-1579)

Y N NA 4. Is annual retraining provided and documented to include the names and dates required training was conducted? (NRC License STB-1579)

Y N NA 5. Are all chips and filings disposed of as radioactive (pyrophoric) waste? (NRC License STB-1579)

Y N NA 6. Are all unserviceable, non-repairable parts disposed of as radioactive waste (without use of demilitarization procedures, which are otherwise not authorized by the license)? (NRC License STB-1579)

Y N NA 7. Are the following documents posted/available for review, as appropriate:

a. NRC Form 3
b. Section 206, Energy Reorganization Act
c. NRC License STB-1579
d. Title 10 CFR 19, 20 and 21
e. Technical Manuals and Bulletins

XIII. Radiographic Facilities (X-ray and Dental Units).

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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Y N NA 1. Is there an inventory/current registry of all ionizing radiation producing devices? (TB MED 521, 1-5l(3))

Y N NA 2. Is there a clinic specific Radiation Safety SOP available for review? (TB MRD 521, 1-5j(5))

Y N NA 3. Is the SOP approved by the SRSO? (RSSO Recommendation)

Y N NA 4. Are radiation Safety survey reports available for all new and/or modified(medical and industrial) radiographic facilities? (AR 40-5, 9-9b(9) and (11))

Y N NA 5. Are surveys performed at least once every two years at permanent installations? (TB MED 521, chapter 5)

Y N NA 6. Are radiographic facilities classified and governed by procedures or conditions of NRC license; ARA; IAW manufacturers operating instructions and NBS Handbook? (AR 40-5, 9-9b(10))

Y N NA 7. Is the LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 8. Is an alternate LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 9. Do the LRSOs have adequate education and training? (NGR 385-11, 1-6g(1))

Y N NA 10. Does the LRSO maintain a personnel dosimetry program? If yes, **Complete Personnel Dosimetry Program Checklist, Section XVI.**

Y N NA 11. Has a quality assurance program been established? Is the program properly documented, reviewed regularly, revised and appropriate actions taken when necessary? (TB MED 521, chapter 6)

Y N NA 12. Have the appropriate warning statements and signs been posted? (TB MED 521, 4-17)

XIV. UNIT LEVEL RSP

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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Y N NA 1. Does the UNIT have a published SOP for handling radioactive commodities? _____ (AR 40-5, 9-9a(2a)) (TB 385-4, 5-6)

Y N NA 2. Is the SOP approved by the SRSO? (RSSO Recommendation)

Y N NA 3. Is the LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 4. Is an alternate LRSO designated in writing by the local Commander? (NGR 385-11, 1-6g)

Y N NA 5. Do the LRSOs have the education and training required for work with the radioactive materials? (NGR 385-11, 1-6g(1))

Y N NA 6. Is Smoking, Eating, Drinking, Chewing Gum, or applying cosmetics prohibited in the radiation controlled area? (AR 40-5, 9-9b(4))

Y N NA 7. Are radioactive material storage areas properly posted? (10 CFR 20.1902)

8. Are copies of the following posted for review near the radiological controlled area:

Y N NA a. Appropriate radiological warning signs.

Y N NA b. List of individual(s) and telephone number(s) to notify in the event of an emergency? (AR 40-5, 9-9a(2)(e))

9. Are copies of the following posted for review at a location frequented by all employees (i.e. safety bulletin board, break room):

Y N NA a. Form NRC 3, Notice to Employees. (10 CFR 19.11b, c, d)

Y N NA b. Section 206 of the Energy Reorganization Act of 1974. (10 CFR 21.6)

Y N NA c. All reported violations from the NRC, NGB RSSO, and USACHPPM. (10 CFR 19.11)

10. Are copies of the following posted or available for review near the radiation controlled area? (10 CFR 21.6(a))

Y N NA a. Local Standard Operating Procedures. (10 CFR 19.11)
Y N NA b. 10 CFR Parts 19, 20, 21. (10 CFR 19.11)
Y N NA c. NRC License? (10 CFR 19.11)

Y N NA 11. If 11a through 11c above, are <u>not</u> posted for review, is a notice posted to describe the location of these documents and a POC? (10 CFR 21.6(b))

XV. STORAGE OF RADIOACTIVE MATERIAL.

STORAGE LOCATION:_____ **LRSO:**_____

Y N NA 1. Are radioactive materials (stored in unrestricted areas) secure from unauthorized access? If not, is the radioactive material under constant surveillance and immediate control? (10 CFR 20.1801 & 20.1802)

Y N NA 2. Is the storage facility constructed of fire retardant materials. (AR 40-5, 9-9b(5))

Y N NA 3. Is the local Fire Department and Military Police, if applicable, notified in writing of the radioactive material storage area? (AR 40-5 9-9b(5))

Y N NA 4. Are health physics surveys (to include contamination swipes) performed at the prescribed interval in areas where radioactive materials are used/stored? (NGR 385-11,4-5c)

Y N NA 5. Are the health physics surveys accurately documented, maintained on file, and contain the following information. (NGR 385-11, 4-5f)

Y N NA a. A schematic drawing of the area.

Y N NA b. Monitoring points recorded on the drawing to include: meter readings, distance from source, and wipe locations.

Y N NA c. Background meter reading(s)and location.

Y N NA d. Date of survey.

Y N NA e. Name, title, and signature of the surveyor.

Y N NA f. Identification of the instrument(s) and detector(s) used, to include serial number(s) and calibration void date.

Y N NA g. Evaluation of the safety characteristics of the location and operation to include: warning signs, required postings, SOPs, etc.

Y N NA 6. Do health physics surveys include survey points in unrestricted areas adjacent to the radiation controlled area? (10 CFR 20.1301)

Y N NA 7. Is the instrumentation adequate to properly perform routine radiation surveys? (NGR 385-11, 1-6d(1)(b))

Y N NA 8. Is the instrumentation properly calibrated for ACTIVE use? (TB 43-180)

Y N NA 9. Is the instrument response checked daily or prior to use (whichever is less frequent) and results recorded? (TB 43-180)

Y N NA 10. Is a DA Label 80 with a current calibration date placed in a conspicuous location on the instrument? (AR 40-5, 9-8a(3))

Y N NA 11. Is Smoking, Eating, Drinking, Chewing Gum, or applying cosmetics prohibited in the radiation-controlled area? (AR 40-5, 9-9b(4))

Y N NA 12. Are radioactive material storage areas properly posted? (10 CFR 20.1902)

13. Are copies of the following posted for review near the radiation controlled area:

Y N NA a. Appropriate radiation signs. (SEE SECTION XVII)

Y N NA b. List of individual(s) and telephone number(s) to notify in the event of an emergency? (AR 40-5, 9-9a(2)(e))

14. Are copies of the following posted for review near the radiation controlled area or at a location frequented by all employees:

Y N NA a. Form NRC 3, Notice to Employees. (10 CFR 19.11b, c, d)

Y N NA b. Section 206 of the Energy Reorganization Act of 1974. (10 CFR 21.6)

Y N NA c. All reported violations from the NRC, NGB RSSO, and USACHPPM. (10 CFR 19.11)

15. Are copies of the following posted or available for review near the radiation controlled area? (10 CFR 21.6(a))

Y N NA a. Local Standard Operating Procedures. (10 CFR 19.11)

Y N NA b. 10 CFR Parts 19, 20, 21. (10 CFR 19.11)

Y N NA c. NRC License? (10 CFR 19.11)

Y N NA 16. If 15a through 15c above, are not posted for review, is a notice posted to describe the location of these documents and a POC? (10 CFR 21.6(b))

XVI. PERSONNEL DOSIMETRY PROGRAM

DOSIMETRY LOCATION:_____ DOSIMETRY RECORDS CUSTODIAN:_____

Y N NA 1. Is there a dosimetry program for minors and declared pregnant women workers who may receive (in one year) greater than 100 mrem (TEDE)? (10 CFR 20.1502)

Y N NA 2. Are Automated Dosimetry Records and DD Form 1952 prepared and maintained in separate files for each person occupationally exposed to ionizing radiation? (AR 11-9, 5-2d) (DA PAM 40-18, 4-2)

Y N NA 3. Are all previous/current occupational exposure data obtained from outside employment, previous organization, or administrative doses and forwarded to the Central Dosimetry Record Repository? (AR 11-9, 5-2d(2))

Y N NA 4. Has a Charge out Record (OF 23), or other flag, been placed in the individuals' health record or civilian employee medical file for Automated Dosimetry Records maintained separately from the health record or medical file? (AR 40-66)

Y N NA 5. Has the local medical authority addressed medical examinations for radiation workers under the health hazard surveillance program? (AR 40-5, 5-9)

Y N NA 6. Is the TLD storage location approved in writing by the RSO? (DA Pam 40-18, 3-4e)

Y N NA 7. Is the Dosimetry Custodian designated in writing by the commander/SRSO? (DA PAM 40-18, 4-1)

Y N NA 8. Do radiation workers (those on a dosimetry program) receive annual briefings regarding radiation hazards/biological effects? (10 CFR 19.12; Statement DD Form 1952; NRC Reg. Guides 8.10, 8.13, and 8.29)

Y N NA 9. Is the annual summary of the Automated Dosimetry Records maintained permanently in the individuals' medical file? (AR 11-9, 5-2d)

Y N NA 10. Has the RSO provided the individual with an annual report of radiation dose? (10 CFR 19)

Y N NA 11. Does the RSO review, sign and date personnel Automated Dosimetry Records? (DA Pam 40-18, 4-3b))

Y N NA 12. Are Automated Dosimetry Records reviewed and filed at the dosimeter exchange frequency by the Dosimetry Custodian? (DA PAM 40-18, 4-3a)

Y N NA 13. Does each dosimeter display some temporary means of individual identification? (DA Pam 40-18, 3-4d)

Y N NA 14. Are dosimeters worn above the waist, below the shoulders and outside the clothing? (DA Pam 40-18, 3-4b)

Y N NA 15. Do AN/UDM-2 operators use wrist or finger dosimeters? (TB 11-6665-227-12)

Y N NA 16. Are visiting personnel briefed on the hazards of exposure to radiation and radioactive material prior to entry into the radiation-controlled area? (Presence of radiation, health hazards, minimizing exposure, appropriate response to warnings/alarms, report of exposure, use of protective clothing and equipment) (10 CFR 19.12).

XVII. RADIOFREQUENCY RADIATION SAFETY PROGRAM.

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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RADIOFREQUENCY - Administrative

Y N NA 1. Does the commander ensure that potentially hazardous systems have been evaluated by USACHPPM before operation? (AR 40-5, 9-9c(1)) (NOTE: Only applies to non-Army developed/fielded systems).

Y N NA 2. Has the commander designated in writing an individual to be Radiation Safety Officer (RSO) or RF Safety Officer (RFSO), as appropriate, to oversee the implementation of the program? (NGR 385-11, 1-6d(2), AR 40-5, 9-4b(1))

Y N NA 3. Does the RSO/LRSO have the authority and responsibility to monitor and enforce the control of nonionizing radiation hazards? (NGR 385-11, 1-6d(4))

Y N NA 4. Are written SOPs, which include radiofrequency safety rules and precautions, reviewed and approved by the commander and RSO? (NGR 385-11, 1-6k(4), AR 40-5, 9-9c(3))

Y N NA 5. Do immediate supervisors enforce RF SOPs, safety rules and special precautions? (NGR 385-11, 1-6k(5))

Y N NA 6. Is an inventory of RF radiation producing equipment maintained by the SRSO or RFSO and updated annually? (NGR 385-11, 3-2a)

Y N NA 7. Does the inventory include the type designation/ nomenclature of the RF producing device, the NSN, the total quality on hand and the Unit Identification Code (UIC)? (NGR 385-11, 3-2b)

RADIOFREQUENCY – Medical Surveillance & Emergencies

Y N NA 1. Are RF accidents, unusual incidents, or personnel injury cases referred immediately for medical attention? (NGR 385-11, 1-6k(6), AR 40-5, 9-12b(2))

Y N NA 2. In the case of a known or suspected overexposure to RF radiation in excess of 5x the PEL, are appropriate eye exams performed? (OTSG Policy Memo dated, 11 Apr 94)

Y N NA 3. Are immediate exams administered within 24 hours or as soon as practical following a suspected or known overexposure? (NGR 385-11, 3-4c)

Y N NA 4. Are accidents resulting in potential or actual overexposures reported to the NGB RSSO and CHPPM within 24 hours: (NGR 385-11, 3-5b&c, AR 40-5, 9c(6), AR 40-5, 9-12b(1))

Radiofrequency Devices – Maintenance & Repair

Y N NA 1. Are maintenance personnel familiar with the potential hazards associated with RF systems? (NGR 385-11, 8-4a))

Y N NA 2. Are all personnel working in or frequenting any portion of a controlled environment, where equipment capable of producing non ionizing radiation in excess of the PELs is energized, informed of the hazard involved and instructed regarding the rules and procedures to be observed prior to their assignment to such areas? (NGR 385-11, 3-3b, AR 40-5, 9-9c(2)9)

Y N NA 3. Do instruction topics include: Safe working techniques and procedures; proper use of protective equipment and devices; accident and incident procedures; pre-operational, operational, and post operational checks or inspections to ensure safety; and maintenance of an operational log for each piece of equipment that will identify when interlocks and other control or warning devices are bypassed or over-ridden? (NGR 385-11, 3-3b)

Y N NA 4. Is refresher training provided annually? (NGR 385-11, 3-3c)

Y N NA 5. For indoor operations, are sources operated into dummy loads in lieu of free space radiating? (NGR 385-11, 8-3a)

Y N NA 6. When RF maintenance is performed, has the power supply been disabled prior to the start of work? (NGR 385-11, 8-4f)

Y N NA 7. Is maintenance performed in strictly controlled areas with warning signs posted as necessary? (NGR 385-11, 8-4d)

Y N NA 8. Are precautions taken to prevent electrical shock and exposure to x-ray radiation hazards associated with RF sources? (NGR 385-11, 8-4e)

Y N NA 9. For free space radiating outside the building, are antennas mounted in areas that are inaccessible to personnel? (NGR 385-11, 8-4c)

Y N NA 10. Are operational logs kept for bypassing and/or overriding interlocks or other warning devices and do they indicate the purpose and duration? (NGR 385-11, 3-3h, AR 40-5, 9-9c(6))

Y N NA 11. Are periodic operational checks conducted on all radiation safety devices such as alarms, lights, and interlocks prior to operation? (NGR 385-11, 3-3g, AR 40-5, 9-9c(4))

Y N NA 12. Is repair of defective devices documented? (NGR 385-11, 3-3g)

Radiofrequency Device Safety

Y N NA 1. Do users comply with the requirements and safety procedures prescribed in applicable FMs & TMs? (AR 40-15, 9-9c(5))

Y N NA 2. Whenever possible, are sources operated into dummy loads in lieu of free space radiating? (NGR 385-11, 8-3a)

Y N NA 3. When operating near occupied areas, are potentially hazardous radiated beams kept at a safe distance through the use of interlocks, antenna sector blanking, fences, or other positive means? (NGR 385-11, 8-3c)

Y N NA 4. Are interlocks, antenna sector blanking systems, and other beam restriction devices inspected periodically? (NGR 385-11, 8-3d)

Y N NA 5. Are only authorized personnel permitted to setup, adjust, and operate RF systems? (NGR 385-11, 8-3e)

Y N NA 6. Are wave guides inspected periodically for damage, cracks, proper flange connections, etc.? (NGR 385-11, 8-3j)

Y N NA 7. Are vehicle mounted whip antennas tied down to prevent contact with overhead power lines? (NGR 385-11, 8-3i)

LOCATION: _____

XVIII. LASER RADIATION SAFETY PROGRAM.

PERSONNEL INTERVIEWED/CURRENT ADDRESS:

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LASER SAFETY PROGRAM – Administration

Y N NA 1. Does the commander ensure that potentially hazardous systems have been evaluated by USACHPPM before operation? (AR 40-5, 9-9c(1)) (NOTE: Only applies to non-Army developed/fielded systems).

Y N NA 2. Has the commander designated in writing an individual to be Radiation Safety Officer (RSO) or Laser Safety Officer (LSO) when the activity operates, maintains or services Class 3b or 4 lasers? (AR 11-9, 1-4k(d))

Y N NA 3. Does the RSO/LSO have the authority and responsibility to monitor and enforce the control of laser hazards? (ANSI Z136.1, 1.3.1)

Y N NA 4. Are written SOPs, which include laser safety rules and precautions, reviewed and approved by the commander and RSO? (NGR 385-11, 1-6k(4), AR 40-5, 9-9c(3) ANSI Z136.1, 1.3.2.4)

Y N NA 5. Do immediate supervisors enforce laser SOPs, safety rules and special precautions? (NGR 385-11, 1-6k(5))

Y N NA 6. Is an inventory of laser producing equipment maintained by the SRSO or LSO and updated annually? (NGR 385-11, 3-2a)

Y N NA 7. Does the inventory include the type designation/nomenclature of the laser device, the NSN, the total quality on hand and the Unit Identification Code and if possible the hazard class? (NGR 385-11, 3-2b)

LASERS – Medical Surveillance & Emergencies

Y N NA 1. Are personnel who operate class 3b and 4 lasers on a medical surveillance program? (NGR 385-11, 1-6k(3), ANSI Z136.1, 1.3.2.10)

Y N NA 2. Are laser accidents or personnel injury cases referred immediately for medical attention? (NGR 385-11, 1-6k(6), AR 40-5, 9-12b(2))

Y N NA 3. Are pre-placement and termination examination performed for personnel who work with class 3b and 4 laser devices? (NGR 385-11, 3-4a, AR 40-5, 9-5b)

Y N NA 4. Are personnel designated as Incidental Laser Workers or Laser Workers by the SRSO? (NGR 385-11, 3-4b)

Y N NA 5. Are immediate exams administered within 24 hours or as soon as practical following a suspected or known overexposure? (NGR 385-11, 3-4c)

Y N NA 6. Are accidents resulting in potential or actual overexposures reported to the NGB RSSO and CHPPM within 24 hours: (NGR 385-11, 3-5b&c, AR 40-5, 9c(6), AR 40-5, 9-12b(1))

LOCATION:_____

LOCATION: _____

LASERS – Maintenance & Repair

Y N NA 1. Are maintenance personnel specifically trained to work on laser systems? (NGR 385-11, 7-7a)

Y N NA 2. Are all personnel working in or frequenting any portion of a controlled environment, where exposure to hazardous levels of LASER radiation is possible, informed of the hazard involved and instructed regarding the rules and procedures to be observed prior to their assignment to such areas? (NGR 385-11, 3-3b, AR 40-5, 9-9c(2), ANSI Z136.1, 1.3.3.9)

Y N NA 3. Do instruction topics include: Safe working techniques and procedures; proper use of protective equipment and devices; accident and incident procedures; pre-operational, operational, and post operational checks or inspections to ensure safety; and maintenance of an operational log for each piece of equipment that will identify when interlocks and other control or warning devices are bypassed or over-ridden? (NGR 385-11, 3-3b)

Y N NA 4. Is refresher training provided annually? (NGR 385-11, 3-3c)

Y N NA 5. Do immediate supervisors maintain a roster of all personnel authorized to operate class 3b and 4 lasers? (NGR 385-11, 1-6k(3))

Y N NA 6. When laser maintenance is performed, is residual power discharged prior to the start of work? (NGR 385-11, 7-7b)

Y N NA 7. Is maintenance performed in strictly controlled areas with barriers and signs posted as necessary? (NGR 385-11, 7-7c)

Y N NA 8. Do local SOPs specify posting requirements for class 3 and 4 lasers and are they utilized appropriately? (NGR 385-11, 7-8a)

Y N NA 9. Is firing of the laser, in maintenance shop areas, directed into a light tight box expressly designed to contain all laser output? (NGR 385-11, 7-7d)

Y N NA 10. Does the maintenance officer ensure that the number of operating personnel on the site for testing does not exceed that necessary to accomplish the task safely and efficiently (NGR 385-11, 7-7e)

Y N NA 11. Are checks, requiring the operation of the laser over an extended distance, conducted under strict controls and the beam travels along a tightly controlled path? (NGR 385-11, 7-7f)

Y N NA 12. Are protective coverings, gloves, or shields used when hands or other parts of the body must be exposed to potentially hazardous levels? (NGR 385-11, 7-3b)

Y N NA 13. Are operational logs kept for bypassing and/or overriding interlocks or other warning devices and do they indicate the purpose and duration? (NGR 385-11, 3-3h, AR 40-5, 9-9c(6))

Y N NA 14. Are the following general precautions followed for the use of lasers:
a. Beam is not directed at personnel
b. Work with lasers is done in areas of high general illumination
c. Protective eyewear (where needed) provide appropriate wavelength and optical density
d. Reflective materials are eliminated from the vicinity of the beam path
e. Fire extinguishers are accessible where necessary
(NGR 385-11, 7-4)

Y N NA 15. Are periodic operational checks conducted on all radiation safety devices such as alarms, lights, and interlocks prior to operation? (NGR 385-11, 3-3g, AR 40-5, 9-9c(4), ANSI Z136.1, 1.3.2.8)

Y N NA 16. Is repair or replacement of defective devices documented? (NGR 385-11,3-3g)

XIX. RADIATION SIGN POSTING. (All radiation signs are subject to the commodity Technical Manual which may require more restrictive posting.)

CAUTION, or DANGER, RADIOACTIVE MATERIAL(S) SIGN. Required at areas/rooms containing radioactive material in quantities greater than (10 CFR 20.1902(e)):

3.7E2Bq or 0.01 uCi Am-241, Pu-239.
3.7E4Bq or 1.0 uCi Ra-226, Sr-90.
3.7E5Bq or 10.0 uCi Co-60.
3.7E6Bq or 100.0 uCi Cs-137, Pm-147.
3.7E7Bq or 1000.0 uCi Ni-63, Th-232, Nat. U.
3.7E8Bq or 10000.0 uCi H-3, Kr-85.

EXCEPTIONS TO POSTING CAUTION/DANGER RADIOACTIVE MATERIAL SIGNS (10 CFR 20.1903): A room or area is not required to be posted for any:

1. Radioactive material that will be in the room/area for less than 8 hours, provided a responsible individual is present during such periods to preclude the exposures of individuals to radiation.

2. Room or area subject to the licensee's control.

3. Sealed source with a radiation level of less than 5.0 mR per hour at 30 centimeters from the source container or housing (the source container must be posted).

4. Hospital rooms/areas containing a radioactive patient, provided a responsible individual is present to preclude radiation/radioactive material exposure in excess of Title 10 CFR.

5. Hospital rooms/areas containing a radioactive patient treated with 1) sealed sources, 2) unsealed source < 30 millicuries, or 3) dose rate < 5 mR/hr at 1 meter from patient.

CAUTION RADIATION AREA SIGN. Required at areas/rooms which could result in an individual receiving a dose equivalent in excess of 5 mR hour at 30 centimeters from a source or surface. Should not be posted at any other location.

BIOASSAYS.

There are no authorized procedures or storage locations within the ARNG requiring bioassays. For information only: Bioassays are required on workers who may receive (in one year) greater than 10 percent of the annual limit on intake (ALI) listed in Appendix B, table 1, Columns 1 and 2, 10 CFR 20 (10 CFR 20.1502)

Bioassays are required on minors and declared pregnant women who may receive (in one year) greater than 10 percent of the above doses (10 CFR 20.1502)

TRANSPORTATION. All incoming radioactive packages containing Type A quantities shall be surveyed within 3 hours of receipt or no later than 3 hours from the beginning of the next working day. (10 CFR 20.1906c)(Quantities less than Type A are exempt (10 CFR 20.1906b(3))